

**EMPLOYMENT AND REGIONAL TOURISM  
IN EUROPEAN COUNTRIES, 1995-2000.**

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***Abstract:***

This article analyses some indicators of tourist activity on a regional level in 12 European Union countries during the period 1995-2000. We also present the ranking of different regions according to hotel tourism indicators within 12 European Union Countries previously belonging to the EEC. Finally we analyse some econometric models that take into account the positive impact of tourism on non-agrarian employment of regions.

***Resumen:***

Este artículo analiza varios indicadores de actividad turística en 98 regiones de 12 países de la Unión Europea durante el período 1995-2000. Presentamos un ranking de las distintas regiones de acuerdo con los indicadores de turismo hotelero. Finalmente analizamos algunos modelos econométricos que tienen en cuenta el impacto positivo del turismo sobre el empleo no agrario regional.

*JEL classification:* C51, L8, R15, R23, R58, O52

*Key Words:* Tourism, European Regions, Econometric Models

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**1. Regional Tourism from national and foreign origin in 1995.**

European tourism is of a remarkable volume and it is growing in numerous regions whether we consider hotel, non-hotel, national or foreign tourism. As pointed out in REY(1998), with more than 2% of world foreign tourism, only 14 countries stand out, 6 of which belonging to the EU. Amongst the EU countries, the most prominent in 1995 were France (11%), Spain (7%), Italy (6%), United Kingdom (4%), Germany (3%) and Austria (3%).

Below, we present a group of indicators of tourist activity in hotels for the 100 European regions analysed in this paper and we gather this information in tables 1-7. The data were elaborated from Eurostat statistics of 1995 and the names of the variables are:

Ons: overnight stays in hotels in the region in thousands of people.

Onsh: number of overnight stays in hotels per thousand inhabitants of the region.

Onshn: number of overnight stays of national origin per thousand inhabitants of the region.

Onshx: number of overnight stays of foreign origin per thousand inhabitants of the region.

Onskm: number of overnight stays per km<sup>2</sup>

Plh: number of hotel places per thousand inhabitants.

Rons, Ronsh and Rplh: Each region's ranking out of the 100 European regions with variables Ons, Onsh y Plh, in descending order where first position corresponds to the region which has the highest value of the variable.

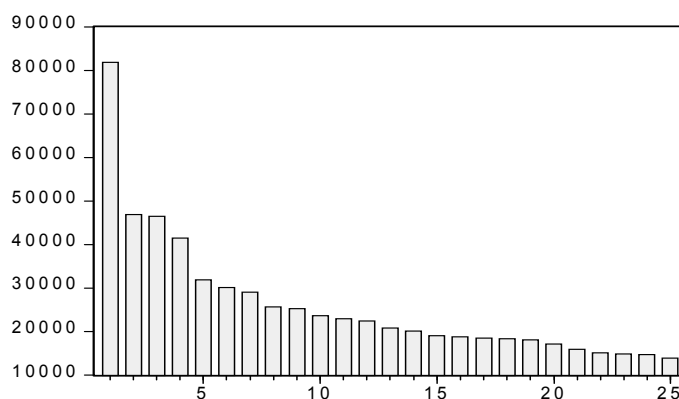
For all 100 regions, the number of overnight stays of national origin per thousand inhabitants, sits between 163 and 17840, the regional average being 1943. The number of overnight stays of foreign origin per thousand inhabitants fluctuates between 49 and 56,554, the regional average being 2,221. The total number of overnight stays per thousand inhabitants fluctuates between 599 and 64,491, the regional average being 4,175.

The intensity of hotel tourism by Km<sup>2</sup> is reflected in the following figures for all 100 European regions: The number of overnight stays of national origin by Km<sup>2</sup> oscillates between 17 and 5,610 with a regional average of 407. Overnight stays of foreign

origin oscillate between 2 and 19,544, the regional average therefore being 562. The total number of overnight stays by Km<sup>2</sup> fluctuates between 20 and 20,509, the regional average being 969. There is a strong correlation between the number of hotel places and the number of overnight stays. The number of hotel places by Km<sup>2</sup> oscillates between 0.22 and 162, the regional average being 7.

Graph 1 shows the top 25 positions corresponding to total overnight stays at hotels and campsites, according to our data.

Graph 1. Overnight stays in top 25 regions, 1995.



Top 25 positions of European Regions for total overnight stays in 1995:  
 1.South East (London), 2.Baleares, 3.Bayern, 4.Île de France (Paris),  
 5.Nisia Aigaiou, Kriti, 6.Trentino Alt-Adige, 7.Emilia-Romagna,  
 8.Veneto, 9.Canarias, 10.Cataluña, 11.Andalucia, 12.Baden-Württemberg,  
 13.Nordrhein-Westfalen, 14.South West (Uk), 15.Scotland, 16.Toscana,  
 17.Lombardia, 18.Algarve and islands (Pt), 19.Ireland, 20.Lazio (Rome),  
 21.Provence-Alpes-Côte d'Azur, 22.Niedersachen, 23.Rhône-Alpes,  
 24.Hessen, 25.Com. Valenciana.

Tables 1 to 7 present the indicators of hotel tourism for 98 European regions classified by country.

Table 1. Regional Tourism Indicators in 1995: Spain

SPAIN	ons	onsh	onshn	onshx	onskm	plh
Galicia	3395	1244	1131	113	115	16
Asturias	1085	1006	956	49	103	13
Cantabria	1137	2160	1898	261	215	28
Pais Vasco	1762	847	650	197	243	7
Com. Navarra	598	1139	998	141	57	13
La Rioja	447	1712	1549	163	89	14
Aragón	2326	1966	1758	208	49	21
C. Madrid	8411	1681	925	755	1052	11
Castilla y León	3409	1353	1174	179	36	14
Castilla-Mancha	1634	970	826	144	21	11
Extremadura	1039	970	879	92	25	11
Cataluña	23612	3891	1404	2487	739	33
C. Valenciana	13804	3541	2062	1479	592	21
Baleares	46883	64792	8237	56554	9350	376
Andalucía	22876	3231	1442	1789	262	20
Murcia	1629	1516	1338	178	144	12
Canarias	25239	16364	2958	13406	3485	65

The Spanish region more outstanding in tourist activity is Baleares which is also the European region of greatest tourist intensity, both in terms relative to its population and in terms of density of tourists received per Km<sup>2</sup>. It is also the second European region most prominent in terms of total number of annual overnight stays, reaching almost 47 million in 1995. The Canarias stands out with 25 million. Also notable is Cataluña with over 23 million, Andalucía with almost 23 million and Valencia with almost 14 million.

In most Spanish regions intensity is greater in terms of national origin tourism (Onshn) than in that of foreign origin (Onshx), the only exceptions being Baleares, Canarias, Cataluña and Andalucía.

Guisan and Neira(2001) present an overview of extra Hotel Tourism in Spanish Regions and Provinces, which is interesting

because this type of tourism also has an important positive effect on the development of Value-Added and Services in several sectors, particularly in Building activities, Restaurants and other Commercial Services.

Table 2 shows the indicators for Italy, the country which occupies first position in the European Union with 208 million overnight stays during the year 1995.

Table 2. Regional Tourism Indicators in 1995: Italy

ITALY	ons	onsh	onshn	onshx	onskm	plh
Piemonte	5067	1179	792	387	199	15
Valle d'Aosta	2630	22192	17841	4351	806	197
Liguria	12226	7349	5402	1947	2257	50
Lombardia	18416	2067	1199	868	772	16
Trentino-Alt Adige	30077	33099	15540	17560	2208	260
Veneto	25574	5783	2353	3430	1393	40
Friuli-Venn. Giulia	3883	3260	1767	1493	495	30
Emilia-Romagna	28959	7382	5636	1747	1309	64
Toscana	18689	5300	2852	2448	813	40
Umbria	3103	3773	2804	970	367	28
Marche	5304	3681	2794	887	547	40
Lazio	17137	3300	1387	1913	996	22
Campania	12136	2112	1162	950	893	15
Abruzzo	3333	2629	2278	352	309	35
Molise	304	916	833	84	69	14
Puglia	4391	1077	963	114	227	12
Basilicata	511	836	759	77	51	14
Calabria	3066	1477	1378	99	203	27
Sicilia	8136	1601	943	657	316	14
Sardegna	5090	3067	2454	613	211	38

The number of overnight stays stand out in the region of Trentino-Alto Adige with 30 million. Also prominent are Emilia Romagna with almost 29 million, Veneto with over 25, Tuscany with more than 18, Lombardia with over 18 and Lazio with 17 million.

Table 3 presents the most relevant indicators for German regions. The overnight stays totals which stand out are Bayern with 46 million, Baden-Württemberg with 22 million, Nordrhein-Wesfalen, with over 20 million, Niedersachsen with over 15 and Hessen over 14 million.

In all German regions, intensity is much greater in national origin terms than in foreign. In the next section and in Guisan and Aguayo(2002) we include some indicators for the new länder, which were included after German unification.

Table 3. Regional Tourism indicators, 1995: Germany

GERMANY, W.	ons	onsh	onshn	onshx	onskm	plh
Schleswig-Holstein	6947	2567	2380	187	442	21
Hamburg	3892	2283	1782	501	5155	14
Niedersachsen	15023	1948	1770	179	317	17
Bremen	978	1439	1144	295	2421	11
Nordrhein-West	20699	1162	911	252	608	10
Hessen	14670	2454	1825	629	695	20
Rheinland-Pfalz	9520	2411	1929	481	480	25
Baden-Württemberg	22364	2178	1799	380	626	19
Bayern	46434	3897	3352	545	658	32
Saarland	834	770	662	108	324	8
Berlin	6720	1937	1441	496	7542	11

Table 4 presents the tourist indicators for Belgium, the Netherlands, Luxembourg and Denmark. None of these regions are to be found amongst the top 25 positions in the ranking of total overnight stays in Europe, the highest rank achieved in this group being West Netherlands which ranks 30<sup>th</sup> with 8 million.

Table 4. Regional Tourism indicators, 1995: Benelux and Denmark

Region	ons	onsh	onshn	onshx	onskm	plh
BELGIUM						
Vlaams Gewest	5666	966	318	648	419	10
Région Wallonne	1985	599	313	287	118	8
Région Bruxelles	3302	3470	163	3307	20510	28
NETHERLANDS						
Noord-Nederland	1397	861	652	209	154	7
Oost-Nederland	2557	805	624	180	226	7
West-Nederland	9665	1339	393	946	900	11
Zuid-Nederland	3027	889	597	292	414	8
LUXEMBOURG	1140	2805	219	2585	441	36
DENMARK	8054	1544	749	795	187	19

Bruxelles and Luxembourg stand out due to their intensity of foreign origin tourism.

In table 5 we gather the tourist indicators for Ireland and the UK, with South East as the most prominent in Ons, Onsh and Onshx.

Table 5. Regional Tourism Indicators in 1995: Ireland and UK

Region	ons	onsh	onshn	onshx	onskm	plh
IRELAND	18046	5020	1863	3157	262	27
UNITED KINGDOM						
North	7466	2409	1696	713	485	21
Yorks. and Humber	9324	1855	1361	494	605	13
East Midlands	6752	1642	1302	340	432	12
East Anglia	4873	2305	1595	710	388	17
South East	81872	4538	1292	3247	3008	17
South West	20054	4167	3029	1138	841	35
West Midlands	8657	1633	1010	623	665	12
North West	8663	1352	897	454	1182	18
Wales	10478	3595	2959	635	505	15
Scotland	18951	3691	1699	1991	241	23
Northern Ireland	1444	878	723	155	102	11

Most prominent in number of overnight stays is the South East, which incorporates London occupying position 1 in the ranking of European regions with almost 82 million overnight stays in total. Other prominent regions are the South West with 20 million, Scotland, with almost 19 million and Ireland, with 18 million. Only 3 regions of the group have greater intensity of foreign origin tourism than that of national origin: South East, Scotland and Ireland.

Table 6 presents the indicators for Portugal and Greece. In the total number of overnight stays, the Greek region of Nisia Aigaiou and Kriti stands out with 25 million and also the Portuguese region of Algarve and Islands, which includes Madeira and Açores, with 13 million.

Table 6. Regional Tourism Indicators in 1995: Greece and Portugal

Region	ons	onsh	onshn	onshx	onskm	plh
GREECE						
Voreia Ellada	6840	2030	1089	941	121	27
Kentriki Ellada	9121	3529	1469	2059	169	54
Attiki	6751	1937	666	1271	1773	21
Nisia Aigaiou+Kriti	25024	24949	2615	22334	1682	270
PORTUGAL						
Norte	2387	678	415	264	113	7
Centro	1533	895	631	264	66	11
Lisboa e Tejo	5864	1772	545	1227	444	15
Alentejo	660	1248	886	362	25	13
Algarve + Islands	13124	38064	5741	32323	2631	239

The more prominent regions for tourist intensity of foreign origin being greater than that of national origin are Nisia Aigaiou, Kentriki Ellada and Attiki in Greece, and the regions Algarve and Islands, and Lisboa and Tejo valley, in Portugal.

Table 7 presents the tourist indicators for French regions. Although there are several regions with high levels of tourism activity, there is only one French region, Île de France, where foreign tourist intensity exceeds national tourist intensity.



Table 7. Regional Tourism Indicators in 1995: France.

FRANCE	ons	onsh	onshn	onshx	onskm	plh
Île de France	41352	3767	1456	2311	3443	21
Champagne-Ardenne	1778	1315	869	446	69	12
Picardie	1471	793	588	205	76	7
Haute-Normandie	1885	1061	752	309	153	11
Centre	4291	1764	1231	532	110	17
Basse-Normandie	3467	2455	1783	672	197	21
Bourgogne	3937	2424	1498	927	125	20
Nord - Pas-Calais	3559	891	620	271	287	8
Lorraine	2695	1166	885	281	114	12
Alsace	4937	2921	1686	1235	596	22
Franche-Comté	1803	1620	1361	259	111	16
Pays de la Loire	3979	1267	1097	170	124	13
Bretagne	5877	2064	1576	488	216	17
Poitou-Charentes	4073	2516	2235	281	158	18
Aquitaine	7277	2539	2133	405	176	24
Midi-Pyrénées	9966	3996	2786	1210	220	36
Limousin	960	1335	1200	135	57	15
Rhône-Alpes	14829	2663	1992	670	339	26
Auvergne	3214	2443	2214	230	124	30
Languedoc-Roussillon	5751	2589	1955	634	210	24
Provence-Alpes-Côte d'Azur	15922	3596	2012	1583	507	32
Corse	1665	6410	4617	1793	192	86

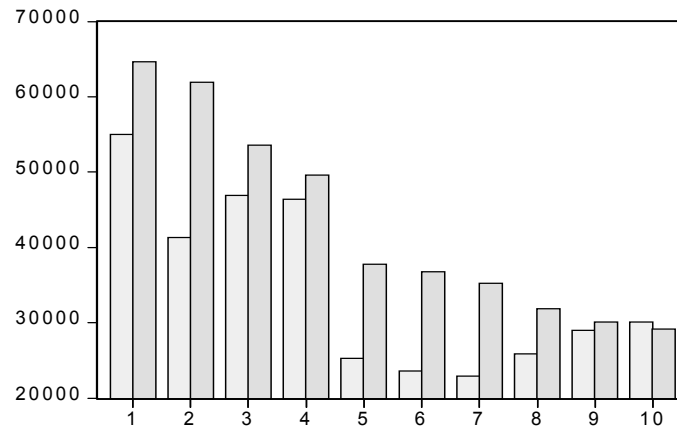
Most prominent in terms of total number of overnight stays are Île de France, which includes Paris, with 41 million overnight stays, Provence Alpes Côte d'Azur with almost 26 million and Rhône-Alpes with almost 15 million overnight stays in total.

### 3. Evolution of Regional Tourism in 1995-2000

Graph 2 shows the values of Ons in the years 1995 and 2000 for the top 10 European regions of year 2000.

There has been a change in UK regional statistics and total Ons for this country in 1995 from the new Eurostat statistics is much lower than the older data of section 2. Although there are some differences between the old and new Eurostat statistics for other regions the differences are not so remarkable as for the case of London and South East.

Graph 2.  
Ons of the top10 European Regions in 1995 and 2000 (thousands).



The top 10 European Union regions of hotel tourism in the year 2000:  
1. South East (London, UK), 2. Île de France (Paris, France), 3. Balears (Spain) 4) Bayern (Germany), 5) Canarias (Spain), 6) Cataluña (Spain), 7) Andalucía (Spain), 8) Nisia Aigaiou and Kriti (Greece) 9) Emilia Romagna (Italy) and 10) Trentino-Alto Adige (Italy).

Tables 8 to 14 show the evolution of Hotel Overnight Stays from 1995 to 2000, in thousands, according to the new statistics.

The total value of Ons in the 12 former EEC countries, including the new German länder, changed from 960.6 million

overnight stays at hotels in 1995 to 1212.6, with an increase of 26% in a period of only 5 years.

Table 8. Evolution of Overnight Stays in 1995-2000: Spain

SPAIN	Ons95	Onsn95	Onsx95	Ons00	Onsn00	Onsx00
Galicia	3395	3086	308	5852	4964	888
Asturias	1085	1032	53	2434	2211	223
Cantabria	1137	1000	137	2237	1929	309
País Vasco	1762	1352	410	2704	1872	831
Com. Navarra	598	524	74	1148	928	219
La Rioja	447	404	43	755	659	96
Aragón	2326	2081	246	3719	3270	449
C. Madrid	8411	4631	3780	12183	6209	5974
Castilla y León	3409	2957	452	6204	5197	1006
Castilla-Mancha	1634	1391	242	3042	2577	465
Extremadura	1039	941	98	1834	1612	223
Cataluña	23611	8520	15091	36733	12702	24032
C. Valenciana	13804	8040	5764	20388	11817	8570
Baleares	46883	5961	40923	53565	4820	48745
Andalucía	22876	10206	12670	35264	16293	18971
Murcia	1629	1437	191	2473	2027	447
Canarias	25239	4562	20677	37756	5773	31983
TOTAL	159285	58125	101160	228290	84859	143431

The percentage of change in Ons for the period 1995-2000 in Spain was 43%, with very high percentage changes in the following regions: Galicia, 46%, Asturias, 124%, Cantabria, 97%, País Vasco, 53%, Navarra, 92%, La Rioja, 69%, Aragón 60%, Madrid 45%, Castilla y León, 82%, Castilla-La Mancha, 58%, Extremadura, 77%, Cataluña 56%, Valencia 48%, Andalucía, 54%, Murcia 52% y Canarias 50%. The highest levels of Ons and Onsh among Spanish regions correspond to Baleares but this region has showed a more moderate percentage of increase than the other ones, with only 14%.

Table 9. Evolution of Overnight Stays in 1995-2000: Italy

ITALY	Ons95	Onsn95	Onsx95	Ons00	Onsn00	Onsx00
Piemonte	5067	3403	1664	5582	3284	2298
Valle d'Aosta	2630	2114	516	2414	1764	650
Liguria	12226	8988	3238	11750	8503	3247
Lombardía	18416	10680	7736	17969	10004	7965
TrentinoAltoAdige	30077	14121	15957	29173	13743	15430
Veneto	25574	10405	15169	26426	10673	15753
Friuli-Venezia G.	3883	2105	1778	3702	2167	1535
Emilia Romagna	28959	22106	6853	30074	23090	6984
Toscana	18689	10057	8633	22137	11453	10684
Umbria	3103	2306	797	3467	2513	954
Marche	5304	4026	1279	5973	4791	1182
Lazio	17137	7201	9936	26664	11227	15437
Abruzzi	3333	2888	446	4511	3927	584
Molise	304	277	28	423	385	38
Campania	12136	6677	5459	14879	8187	6692
Puglia	4391	3924	466	4785	3994	791
Basilicata	511	464	47	1051	970	81
Calabria	3066	2860	206	4579	3844	735
Sicilia	8136	4794	3342	11624	6940	4684
Sardegna	5090	4072	1017	6432	4932	1500
TOTAL	208033	123467	84566	233615	136391	97224

The percentage of change for Ons in Italy was 12%. Some regions such as Lazio with 56% have experienced a percentage change clearly higher than average.

In table 10, besides the regions of section 2 we include the new regions of Germany after unification: Brandenburg, Mecklenburg-Vorpommern, Sachsen, Sachsen-Anhalt and Thüringen.

In table 13 the Portuguese regions of Madeira and Açores are dealt with separately from Algarve and Algarve.

Table 10. Evolution of Overnight Stays in 1995-2000: Germany

GERMANY	Ons95	Onsn95	Onsx95	Ons00	Onsn00	Onsx00
Baden-W.	22364	18465	3899	24567	19940	4627
Bayern	46434	39940	6495	49594	40903	8690
Berlin	6720	4999	1721	10757	7817	2940
Brandenburg	3859	3453	406	4865	4431	434
Bremen	978	778	200	1249	953	295
Hamburg	3892	3038	855	4628	3546	1082
Hessen	14670	10909	3761	16363	11813	4550
Mecklenburg-Vor.	5524	5334	190	8785	8468	317
Niedersachsen	15023	13646	1377	16652	14776	1876
Nordrhein-West.	20699	16219	4480	22765	17637	5129
Rheinland-Pfalz	9520	7619	1901	11433	8954	2480
Saarland	834	718	117	935	782	153
Sachsen	6762	6171	591	9745	8954	792
Sachsen Anhalt	3430	3069	361	3321	3039	282
Schleswig-Holst.	6947	6442	505	6820	6227	593
Thüringen	4673	4348	324	5591	5191	400
TOTAL	172331	145147	27184	198071	163430	34641

Table 11. Evolution of Ons in 1995-2000: Benelux and Denmark

Region	Ons95	Onsn95	Onsx95	Ons00	Onsn00	Onsx00
Bruxelles	3302	155	3147	4320	398	3922
Vlaams Gewest	5666	1863	3803	7513	2449	5064
Région Wallonne	1986	1036	950	2395	1198	1197
BELGIUM	10954	3054	7900	14228	4045	10183
Noord-Nederland	1397	1058	339	2478	1932	546
Oost-Nederland	2557	2005	552	3868	2901	967
West-Nederland	9665	2837	6828	18759	6161	12598
Zuid-Nederland	3027	2033	994	4617	3033	1584
NETHERLANDS	16646	7933	8713	29722	14027	15695
LUXEMBOURG	1140	89	1051	1238	68	1169
DENMARK	8054	3908	4146	9210	4599	4611
TOTAL	36794	14984	21810	54398	22740	31659

Table 12. Evolution of Ons in 1995-2000: Ireland and UK

Region	Ons95	Onsn95	Onsx95	Ons00	Onsn00	Onsx00
IRELAND	18046	6698	11348	24268	6786	17482
North East	1639	1150	489	4538	3900	638
North West	12072	9854	2218	21301	19010	2291
Yorkshire	8298	6842	1456	10032	8790	1242
East Midlands	9233	8428	805	5868	4930	938
West Midlands	7224	5354	1869	9981	7640	2341
East Anglia	4258	3371	887	5553	4870	683
South-East	55023	20230	34793	64620	29270	35350
South West	17491	14576	2916	28808	25390	3418
Wales	9672	8626	1045	9168	7910	1258
Scotland	17828	8726	9103	25200	20280	4920
Northern Ireland	1335	1190	145	2682	2630	52
UK	144072	88346	55726	187751	134620	53131
TOTAL	162118	95044	67074	212019	141406	70613

The new names of regions in the UK imply a different territorial definition by Eurostat statistics in the year 2000 from that of section 2, and we have elaborated some provisional estimations for non available data of the year 1995 according to the new criteria.

Table 13. Evolution of Ons in 1995-2000: Greece and Portugal

Region	Ons95	Onsn95	Onsx95	Ons00	Onsn00	Onsx00
Voreia Ellada	6750	3510	3240	8796	4482	4314
Kentriki+Attiki	16720	6096	10624	20620	7284	13336
Nisia A. +Kriti	25911	2301	23610	31888	2901	28987
GREECE	49381	11907	37474	61304	14667	46637
Norte	2388	1459	929	3013	1865	1148
Centro	1534	1081	453	2000	1418	583
Lisboa e Tejo	5864	1803	4061	7824	2408	5416
Alentejo+Algarve	13784	2448	11336	15417	2965	12451
Açores+Madeira	4368	789	3579	5542	1038	4504
PORTUGAL	27938	7580	20358	33796	9694	24102
TOTAL	77318	19487	57831	95099	24361	70738

The total increase of Ons in Germany during the period 1995-2000 is a 15%, while the percentage of increase in Belgium was 30%, in the Netherlands 79%, in Luxembourg a 9% and in Denmark a 14%.

Ireland has experienced an increase of 34% in Ons during the same period, the UK a 30%, Greece a 24% and Portugal a 21%.

Finally table 21 shows the evolution of Ons in France, with a total increase of 32% during the period 1995-2000.

Table 14. Evolution of Overnight Stays in 1995-2000: France

FRANCE	Ons95	Onsn95	Onsx95	Ons00	Onsn00	Onsx00
Île de France	41352	15982	25371	61942	25130	36812
Champagne-A.	1778	1175	603	2335	1497	838
Picardie	1471	1091	380	2348	1599	748
H. Normandie	1885	1336	549	2565	1746	819
Centre	4291	2996	1295	5971	4239	1732
B. Normandie	3467	2519	949	3990	2582	1408
Bourgogne	3937	2432	1505	4078	2507	1571
Nord-Pas-Calais	3559	2476	1083	5827	4051	1775
Lorraine	2695	2045	651	3499	2442	1057
Alsace	4937	2849	2088	5994	3365	2628
Franche-Comté	1803	1515	288	2127	1681	446
Pays de la Loire	3979	3443	535	5100	4378	722
Bretagne	5877	4486	1391	6405	5043	1362
PoitouCharentes	4073	3618	456	4983	4374	608
Aquitaine	7277	6114	1162	8075	6483	1592
Midi-Pyrénées	9966	6949	3017	9695	6084	3611
Limousin	960	862	97	1317	1147	170
Rhône-Alpes	14829	11096	3733	18224	12772	5452
Auvergne	3214	2912	302	3556	3109	447
Languedoc-R.	5751	4344	1407	7154	5412	1742
Prov.-Alps-C.A	15922	8910	7012	23166	12555	10611
Corse	1665	1199	466	2725	1863	862
TOTAL	144688	90349	54339	191073	114059	77014

#### 4. Econometric models of Tourism and Employment

In several comparative studies of European regions, such as those cited in the bibliography and others there cited, we can see the important impact tourism has on non-agrarian employment at regional level, particularly in Building and Market Services.

In this study we have not analysed the evolution of non-hotel tourism because could have been unable to get data for all the countries but we hope to publish that interesting analysis in the near future and include not only the 12 former EEC countries but also other European countries.

The following model shows the relation non agrarian employment in the year 2000, LNA00, has with the Value-Added of Industry, VI, and Government Services, G, in 1995, together with hotel tourism, Ons, in 1995 and its increase for 1995-2000.

Other variables such as the increases of VI and VG during the period 1995-2000, and indicators of non-hotel tourism have also shown significant impact on non-agrarian employment in the estimated models for some countries, but we have been unable to include them here because of unavailability of data for all the sample.

Relation of LNA00 with Industry, Government Services and Tourism

Least Squares. Dependent Variable: LNA00				
Included observations: 98				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
VI95	0.024204	0.005641	4.290625	0.0000
VG95	0.054214	0.007800	6.950697	0.0000
ONS95	0.013829	0.006141	2.251767	0.0267
ONS00-ONS95	0.078075	0.016678	4.681305	0.0000
R-squared	0.908546	Mean dependent var	1382.415	
Adjusted R-squared	0.905627	S.D. dependent var	1466.177	
S.E. of regression	450.4119	Akaike info criterion	15.09816	
Sum squared resid	19069866	Schwarz criterion	15.20367	
Log likelihood	-735.8099	Durbin-Watson stat	1.969866	



In Guisan and Aguayo(2001) and (2002) we analyse the impact of tourism on regional employment in France, Germany and Italy, and include references to other interesting studies on this subject.

## **5. Conclusions**

In this paper we have presented a general overview of the regional distribution of hotel tourism in the regions within 12 EU countries corresponding to former EEC and Eastern Germany, which shows the increasing trend in many regions.

We have included a cross-section model of 98 European regions that relates non agrarian employment with Industry, Government Services and Tourism, because these three variables have a positive effect on the development of Building and Market Services and thus an important impact on regional employment in those sectors.

According to the new Eurostat statistics of years 1995 and 2000, the most outstanding regions in Overnight Stays at hotels, Ons, are the following:

1) South East 2) Île de France, 3) Baleares, 4) Bayern, 5) Canarias, 6) Cataluña, 7) Andalucía, 8) Nisia Aigaiou and Kriti 9)Emilia Romagana and 10) Trentino-Alt Adige.

The 12 countries analysed here have undergone an increase in Ons from 960.6 millions in 1995 to 1212.6 millions in 2000, implying a percentage change of 26%. From national origin the change was from 546.6 millions to 687.2 and from foreign origin the change was from 414.0 to 525.3 millions.

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<sup>1</sup> Información sobre estos artículos en: <http://www.usc.es/economet>